

AMENDMENTS TO THE CLAIMS

The listing of claims replaces all prior versions and listings of claims. Only those claims being amended herein show their changes in highlighted form, where insertions appear as underlined text (e.g., insertions), while deletions appear as strikethrough text (e.g., ~~deletions~~) or enclosed in double brackets (e.g., ~~[[deletion]]~~).

1. (Currently Amended) An apparatus for aspirating, irrigating and/or cleansing wounds, comprising

a) a fluid flowpath, comprising

i) a conformable wound dressing, having a backing layer capable of forming a relatively fluid-tight seal or closure over a wound, the backing layer comprising a wound-facing face,

at least one inlet conduit for moving a fluid in the flowpath to the wound, wherein the at least one inlet conduit passes through or under the wound-facing face of the backing layer,

at least one outlet conduit for moving the fluid in the flowpath from the wound, wherein the at least one outlet conduit passes through or under the wound-facing face of the backing layer,

the backing layer forming a relatively fluid-tight seal or closure at the at least one inlet conduit and the at least one outlet conduit, and

ii) means for fluid cleansing communicating with the at least one inlet conduit and the at least one outlet conduit and adapted to remove from the fluid in the flowpath one or more materials deleterious to wound;

b) a fluid reservoir switchably connected to an integer of the flowpath via means for flow switching in the flowpath between supply of a fluid from the fluid reservoir, ~~[[or]]~~ recirculation of the fluid in the flowpath, and ~~[[or]]~~ a combination of the supply and ~~[[or]]~~ the recirculation, wherein the fluid in the flowpath comprises an exudate from the wound or the fluid from the fluid reservoir, or a combination thereof; and~~[[,]]~~

c) a device for moving the fluid through the flowpath.

2. (Previously Presented) The apparatus of claim 1, wherein the means for fluid cleansing is a single-phase system, in which the fluid moving from the wound passes through the means for fluid cleansing, and the one or more materials deleterious to wound healing are removed from the fluid, without the fluid moving from the wound coming into direct or indirect contact with another fluid in the means for fluid cleansing.

3. (Previously Presented) The apparatus of claim 1, wherein in the means for fluid cleansing is a two-phase system, in which the fluid moving from the wound passes through the means for fluid cleansing, and the one or more materials deleterious to wound healing are removed from the fluid, by the fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.

4. (Previously Presented) The apparatus of claim 3, wherein, in the means for fluid cleansing, the fluid moving from the wound and the other fluid in the means for fluid cleansing are separated by an integer of the means for fluid cleansing, which is selectively permeable to the one or more materials deleterious to wound healing.

5. (Previously Presented) The apparatus of claim 3, wherein, in the means for fluid cleansing, the fluid moving from the wound and the other fluid in the means for fluid cleansing are separated by an integer of the means for fluid cleansing, which is not selectively permeable to the one or more materials deleterious to wound healing, and the other fluid in the means for fluid cleansing comprises or is in contact, or a combination thereof, with a material that removes the one or more materials deleterious to wound healing.

6. (Previously Presented) The apparatus of claim 3, wherein the material that removes the one or more materials deleterious to wound healing is selected from the group consisting of an antagonist, a binder, a degrader, a chelator, an ion exchanger and an anti-oxidant.

7. (Currently Amended) The apparatus of claim 3, wherein the material that removes the one or more materials deleterious to wound healing is selected from the group consisting of 4-(2-aminoethyl)-benzene sulphonyl fluoride (AEBSP, PefaBloc), N α -p-tosyl-L-lysine chloromethyl ketone (TLCK), ϵ -aminocaproyl-p-chlorobenzylamide, a cysteine protease inhibitor, a matrix metalloprotease inhibitor, a carboxyl (acid) protease inhibit, an ~~anti-inflammatory~~ anti-inflammatory peptidomimetic, 3-hydroxytyramine (dopamine), ascorbic acid (vitamin C), vitamin E, glutathione, desferrioxamine (DFO) and 3-hydroxytyramine (dopamine).

8. (Previously Presented) The apparatus of claim 1, wherein the materials deleterious to wound healing is selected from the group, consisting of an oxidant, a protease, an endotoxin, an autoinducer signaling molecule, an inhibitor of angiogenesis, a pro-inflammatory cytokine and an inflammatory.

9. (Cancelled)

10. (Previously Presented) A method of treating wounds to promote wound healing using the apparatus for aspirating, irrigating and/or cleansing wounds of claim 1.

11. (Previously Presented) The apparatus of claim 1, further comprising a device for transferring the fluid from the flowpath to waste, wherein the device for transferring the fluid from the flowpath to waste comprises a bleed line.

12. (Previously Presented) The apparatus of claim 11, wherein the device for transferring the fluid from the flowpath to the waste comprises a valve.

13. (Previously Presented) The apparatus of claim 11, wherein the device for transferring the fluid from the flowpath to the waste comprises a pump.

14. (Currently Amended) The apparatus of claim 1, wherein the device for moving the fluid ~~from~~ through the flowpath comprises a pump.

15. (Currently Amended) An apparatus for aspirating, irrigating and/or cleansing wounds, comprising

a) a fluid flowpath, comprising

i) a conformable wound dressing, having a backing layer capable of forming a relatively fluid-tight seal or closure over a wound, the backing layer comprising a wound-facing face,

at least one inlet conduit for moving a fluid to the wound, wherein the at least one inlet conduit is connected to the flowpath and passes through or under the wound-facing face of the backing layer,

at least one outlet conduit for moving the fluid from the wound, wherein the at least one outlet conduit is connected to the flowpath and passes through or under the wound-facing face of the backing layer,

the backing layer forming a relatively fluid-tight seal or closure at the at least one inlet conduit and the at least one outlet conduit, and

ii) means for fluid cleansing communicating to the at least one inlet conduit and the at least one outlet conduit adapted to remove from the fluid in the flowpath one or more materials deleterious to wound healing;

b) a fluid reservoir switchably connected to the flowpath via means for flow switching in the flowpath between supply of a fluid from the fluid reservoir, [[or]] recirculation of the fluid in the flowpath, and [[or]] a combination of the supply and the recirculation, wherein the fluid in the flowpath comprises an exudate from the wound or the fluid from the fluid reservoir, or a combination thereof;

c) a device for moving the fluid through the flowpath; and

d) means for bleeding the flowpath, adapted to be regulated such that the fluid may be supplied to fill the flowpath from the fluid reservoir via the means for flow switching, or such that the fluid may be recirculated by the device through the flowpath, or the combination of the supply and recirculation.

16. (Previously Presented) The apparatus of claim 15, wherein the means for fluid cleansing is a single-phase system, in which the fluid moving from the wound passes through the means for fluid cleansing and the one or more materials deleterious to wound healing are removed from the fluid, without the fluid moving from the wound coming into direct or indirect contact with another fluid in the means for fluid cleansing.

17. (Previously Presented) The apparatus of claim 15, wherein in the means for fluid cleansing is a two-phase system, in which the fluid moving from the wound passes through the means for fluid cleansing and the one or more materials deleterious to wound healing are removed from the fluid, by the fluid coming into direct or indirect contact with another fluid in the means for fluid cleansing.

18. (Previously Presented) The apparatus of claim 15, wherein the material that removes the one or more materials deleterious to wound healing is selected from a group consisting of an antagonist, a binder, a degrader, a chelator, an ion exchanger, and an anti-oxidant.

19. (Previously Presented) The apparatus of claim 15, wherein the one or more materials deleterious to wound healing is selected from the group consisting of an oxidant, a

protease, an endotoxin, an autoinducer signaling molecule, an inhibitor of angiogenesis, a pro-inflammatory cytokine, and an inflammatory.

20. (Previously Presented) The apparatus of claim 15, wherein the means for bleeding comprises a valve.

21. (Previously Presented) A method of treating wounds to promote wound healing using the apparatus for aspirating, irrigating and/or cleansing wounds of claim 15.

22. (Currently Amended) An apparatus for aspirating, irrigating and/or cleansing wounds, comprising

a) a fluid flowpath, comprising

i) a conformable wound dressing, having a backing layer capable of forming a relatively fluid-tight seal or closure over a wound, the backing layer comprising a wound-facing face,

at least one inlet conduit for moving a fluid to the wound, wherein the at least one inlet conduit is connected to the flowpath and passes through or under the wound-facing face of the backing layer,

at least one outlet conduit for moving the fluid from the wound, wherein the at least one outlet conduit is connected to the flowpath and passes through or under the wound-facing face of the backing layer,

the backing layer forming a relatively fluid-tight seal or closure at the at least one inlet conduit and the at least one outlet conduit, and

ii) a fluid cleansing system selected from the group consisting of a single-phase system, a two-phase system, a filtration unit, an ultrafiltration unit, an adsorption unit, a chemical adsorption unit, a dialysis unit, and a biphasic extraction unit;

b) a fluid reservoir switchably connected to the flowpath, wherein connection between the fluid reservoir and the flowpath is switchable between supply of a fluid from the fluid reservoir, [[or]] recirculation of the fluid in the flowpath, and [[or]] a combination of the supply and the recirculation, and wherein the fluid in the flowpath comprises an exudate from the wound or the fluid from the fluid reservoir, or a combination thereof; and[[,]]

c) a first pump communicating with the flowpath, whereby the first pump is capable of moving the fluid through the flowpath.

23. (Previously Presented) The apparatus of claim 22, further comprising a regulator for bleeding the flowpath.

24. (Previously Presented) The apparatus of claim 23, wherein the regulator comprises a valve.

25. (Previously Presented) The apparatus of claim 23, wherein the regulator comprises a second pump.

26. (Previously Presented) The apparatus of claim 22, further comprising at least one bleed line communicating with the flowpath.

27. (Previously Presented) The apparatus of claim 26, wherein the bleed line communicates with the flowpath through a valve.

28. (Previously Presented) The apparatus of claim 22, further comprising a bleed valve.

29. (Previously Presented) The apparatus of claim 22, wherein the first pump is selected from the group consisting of a reciprocating pump, a shuttle pump, a diaphragm pump, a piston pump, a rotary pump, a centrifugal pump, a flexible impeller pump, a progressing cavity pump, a rotary vane pump, a peristaltic pump and a vacuum pump.

30. (Previously Presented) The apparatus of claim 27, wherein the first pump further comprises a pressure regulator.

31. (Previously Presented) The apparatus of claim 22, wherein the fluid reservoir is switchably connected to the flowpath through a valve.

32. (Previously Presented) The apparatus of claim 22, wherein the fluid cleansing system comprises a material selected from the group consisting of an antagonist, a binder, a degrader, a chelator, an ion exchanger, and an anti-oxidant.

33. (Previously Presented) The method of treating wounds to promote wound healing using the apparatus of claim 22.